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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,758	05/13/2005	Uwe Emig	103196-00010	7058
4372	7590	04/06/2006	EXAMINER	
ARENT FOX PLLC 1050 CONNECTICUT AVENUE, N.W. SUITE 400 WASHINGTON, DC 20036			COOLMAN, VAUGHN	
			ART UNIT	PAPER NUMBER
			3618	

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/534,758

Applicant(s)

EMIG, UWE

Examiner

Vaughn T. Coolman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claim 1 limitation of “substantially parallel axes [extending] transversely to the longitudinal direction of the ski”, the claim 5 limitation wherein “the wall thickness of the component of the support structure varies”, the claim 7 limitation wherein “the support structure is formed from a plurality of components lying side by side”, and the claim 15 limitation wherein “the ski body is configured as a sandwich construction” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

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be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The disclosure is objected to because of the following informalities: a) no section headings as outlined above, b) line 30 on page 4 - ski body is referred to as reference character 10 rather than reference character 1 as previously recited, and c) page 5, line 31 – the word “piste” was not translated from the original document.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 positively recites the limitation wherein “at least one upper chord element . . . is supported on the ski body by its ends, wherein on the upper side of the ski body (1) there is arranged a support structure (6), on which the upper chord element (10) is mounted . . .” The drawings show the upper chord element (10) being mounted on the ski utilizing items 12 and 13, described on page 5, lines 6-9 as resilient supports. Furthermore, the disclosure states on page 1, lines 27-28 that the support structure is an element of the invention “on which the upper chord element is supported”. Page 3, lines 1-5 suggest that mounting the upper chord element can be achieved by providing openings in the support structure to support the upper chord element in a sliding manner. Examiner respectfully suggests that without other mounting means, slidably supporting the upper chord element(s) in the manner suggested will not result in the upper chord

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element being mounted on the ski body, rather the chord element would readily slide out of the support structure during use without further means of attachment. The contradictory language of the claim renders it indefinite.

All other rejected claims listed above depend from a rejected base claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-6, 8-9, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Restani (EP 1,092,454 A1) in view of Riha (FR 1,254,377).

Examiner notes that reliance is made upon the text from US Patent Application Publication US 2004/0046362 A1 for translation of the European reference and all paragraph and line number references are directed to the US document. Both documents claim priority to FR 9913052 and disclose identical subject matter.

[claim 1] Restani discloses a downhill ski (see FIGS 1-9) having a ski body (10), which has a running surface on its under side (shown in FIGS 2 and 3) and, on its upper side (top surface of item 13) facing away from the running surface, comprises at least one upper chord element (50, see FIG 5) which extends in the longitudinal direction of the ski body, absorbs tensile and compressive forces (paragraph 0023, lines 11-15), and is supported on the ski body by its ends (paragraph 0076 and FIG 5, items 54 [unlabeled at front] and 55).

Restani fails to disclose a support structure being bent at intervals in alternating directions on the upper side of the ski. Riha teaches (see FIG 1) on the upper side of a ski body (1) there being arranged a support structure (11) which is formed from an elongate flat component (11) that is bent at intervals in alternating directions in each case at an angle to the running surface (shown in FIG 1), about substantially parallel axes (not shown), which extend transversely to the longitudinal direction of the ski. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the ski shown by Restani with the support structure as taught by Riha, since such a modification would provide the advantage of stiffening the ski in a flexible manner that could be customized according to the type of material used for the support structure.

The combination would disclose the upper chord element being mounted, as best understood by the examiner, on the support structure. The binding plate to which the upper chord element of Restani is connected is located above the upper surface of the ski, while the support structure of Riha is below the binding plate of his respective ski, therefore, the upper chord element would be located, at least in part above, or on, the support structure in the modified invention.

[claim 2] Riha further shows (FIG 1) the support structure having an undulating, or wavelike, form.

[claim 4] Riha does not explicitly disclose teach the support structure being made of a metal sheet. However, he does disclose the support structure as a spring band, “bande a resort” (Column 4, line 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the spring band support structure of Riha out of metal

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sheet due to the vast database of information concerning the material and mechanical properties/behavior of metal sheet.

[claim 5] Riha further shows the wall thickness of the elongate flat component (11) varying (shown in FIG 1). Upon inspection of FIG 1, it can be seen that the bent flat component (11) is thicker in cross section in the center region cutaway than in either of the end region cutaways.

[claim 6] Riha further shows (FIG 1) that the overall height of the support structure (11) decreases from the centre of the ski toward the ends of the ski. This is also mentioned in the text of the patent as “la diminution de hauteur” or the reduction in height, “dans la zone de la pointe du ski” or in the zone of the point of the ski.

[claim 8] Riha further shows that the angle of inclination of the portions of the support structure (11) which are inclined in relation to the running surface (1) changes from the centre of the ski toward the ends of the ski. Upon inspection of FIG 1, it can be seen that the angle of inclination is steeper with respect to the running surface of the ski in the rear end region cutaway than in the center region cutaway. Although not clearly shown in the figure presented by Riha, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the same technique of varying the angle of inclination at the front end of the ski as is shown at the rear end. The motivation to do so would be to vary the stiffness of the ski along the length to compliment the user’s style or the terrain in which the ski was to be utilized.

[claim 9] Restani further discloses the upper chord element including one or more of either rods and/or tubes made of high-strength material (paragraph 0044). Examiner notes that

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the materials disclosed by Restani (aluminum alloy, rigid steel cords of carbon fiber, etc) are all old and well known materials of high strength.

[claim 13] The combination of Restani and Riha would disclose the support structure (11) being at least partly covered on its upper side by a thin-walled plate-shaped element (FIG 5 of Restani, item 53).

[claim 14] Restani further shows a box-shaped casing (2), which encloses the support structure (11) being attached to the ski body (see FIGS 1 and 2). The combination would disclose the box-shaped casing also enclosing the upper chord element of Restani (see FIGS 2 and 3 by way of example).

[claim 15] Restani further discloses his ski body (10) being configured as a sandwich construction (including layers 11, 12, and 13 shown in FIG 2).

Claims 3, 7, and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Restani (EP 1,092,454 A1) in view of Riha (FR 1,254,377) and further in view of Emig et al (WO 00/62877).

Examiner notes that reliance is made upon the text from U.S. Patent No. 6,679,513 B1 for translation of the European reference and all paragraph and line number references are directed to the US document. Both documents claim priority to DE 19917992 and disclose identical subject matter.

[claim 3] Restani in view of Riha discloses all of the elements of the claimed invention as described above except for the support structure being made of a fiber/plastics material composite. Emig teaches a support structure (4) having an undulating form similar to Riha's

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support structure being made from plastics or a fiber composite material (Column 3, lines 21-22).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the ski shown by Restani as modified Riha, with the material selection as taught by Emig, since such a modification would provide the advantage of

[claim 7] Restani in view of Riha discloses all of the elements of the claimed invention as described above except for the support structure being formed from a plurality of components lying side by side. Emig teaches (see FIG 3) a support structure (14) having an undulating form similar to Riha's support structure being formed from a plurality of components (16) lying side by side. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the ski shown by Restani as modified by Riha, with the plurality of components forming the support structure as taught by Emig, since such a modification would provide the advantage of being able to adjust the tension or material properties of each one of the plurality of components individually to improve the handling of the ski according to the user's personal style of skiing.

[claims 10 and 11] Restani in view of Riha discloses all of the elements of the claimed invention as described above except for the support structure including openings or recess in which the upper chord element is arranged. Emig teaches a support structure (15) having openings (19) or recesses, in which an upper chord element (16) is arranged.

Although Emig does not teach explicitly the upper chord element (16) being supported in a sliding manner in the openings (19) or recesses of the support structure (15), Restani discloses a reason for attaching his chord element (20) slidably (utilizing item 29) in his support structure, the core (15), being to limit friction between the chord (20) and the support structure (15). The

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combination would disclose the upper chord element being arranged at a distance from the ski body of Restani. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the ski shown by Restani as modified by Riha, with the openings and chord coupling as taught by Emig, since such a modification would provide the advantage, according to Emig, of allowing the upper chord element being able to execute a small longitudinal movement relative to the ski body, similar to the sliding movement disclosed by Restani.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Restani (EP 1,092,454 A1) in view of Riha (FR 1,254,377) and further in view of Mayr (U.S. Patent No. 5,199,734).

[claim 12] Restani in view of Riha discloses all of the elements of the claimed invention as described above except for explicitly stating the support structure being connected to the ski body by adhesive or cohesive means and/or mechanical means. Mayr teaches (see FIGS 1-6) an undulating support structure (3) being connected to a ski body (1, 7) by adhesive means and/or mechanical means (Column 2, lines 49-56). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the ski shown by Restani as modified by Riha, with the connection means as taught by Mayr, since such a modification would provide, according to Mayr, the advantage of the upper surface (7), or chord, of the ski not absorbing shear forces when adhesive and mechanical connections are used in conjunction (Column 2, lines 53-56).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Faye (U.S. Patent No. 5,915,717) teaches an undulating support structure adhesively bonded to a ski body.

Forneri (U.S. Patent No. 5,393,085) teaches a plurality of rods or tubes connected above the running surface and along the length of a ski.

Mutzhas (U.S. Patent No. 3,398,968) teaches an undulating element for a ski.

Huyghe et al (U.S. Patent No. 6,182,998 B1) and Le Masson et al (U.S. Patent No. 5,393,086) teach upper chord elements and support structures connected to and located above a ski body.

Rohrmoser (U.S. Patent No. 5,372,370) teaches sandwich construction for a ski body.

Sedlmair teaches undulating structure located above a ski body.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vaughn T. Coolman whose telephone number is (571) 272-6014. The examiner can normally be reached on Monday thru Friday, 8am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Ellis can be reached on (571) 272-6914. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 03/27/06

Travis Coolman
Examiner
Art Unit 3618

vtc



CHRISTOPHER P. ELLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600